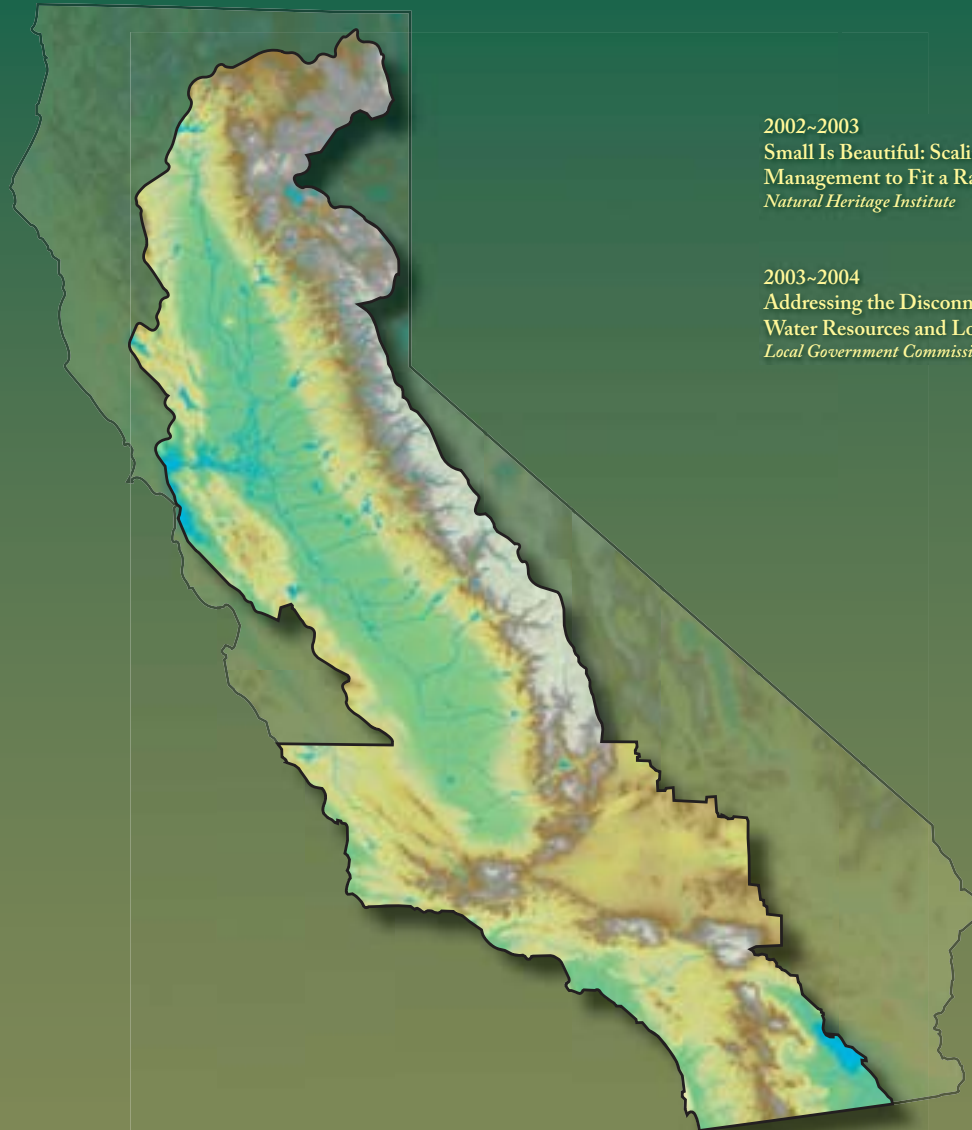


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SMALL IS BEAUTIFUL: SCALING ADAPTIVE MANAGEMENT TO FIT A RANGE OF RIVERINE SYSTEMS

Natural Heritage Institute



Yuba River (photograph by Alan Banfield).

PURPOSE

Tailor the concept of adaptive management to support small-scale restoration and watershed management efforts

PROJECT GOALS

- ✧ Identify and develop pilot projects in several communities and assist in the application of adaptive management to restoration projects
- ✧ Effectively apply adaptive management to small-scale systems to generate meaningful and transferable information about river function and restoration
- ✧ Develop and distribute a primer for applying adaptive management in smaller-scale restoration projects

AWARD AMOUNT

\$183,500

WATERSHED

Applicable to all watersheds in the CALFED solution area

COUNTY

Applicable to all counties in the CALFED solution area

CALFED REGION

Program-wide

LEGISLATIVE DISTRICTS

Applicable to all legislative districts in the CALFED solution area

Benefits to the Bay-Delta System

Implementing an effective adaptive management plan is essential for projects that aim to optimize water quality and improve aquatic and terrestrial habitats. The Natural Heritage Institute is working with other organizations, including the College of Natural Resources at the University of California, Berkeley, to provide adaptive management expertise for small projects. Project activities help communities identify key ecological processes in their watershed and manage more effectively to restore those processes. Small Is Beautiful meets an environmental justice goal by assisting small urban and rural watersheds that have financial hardships with developing adaptive management plans for their riverine and restoration projects. This project benefits the Bay-Delta system by helping smaller projects meet their restoration and management goals, and improving the health of the individual watersheds and the Bay-Delta system as a whole.

PROJECT OVERVIEW

Adaptive management is a resource management strategy based on the assumption that ecosystems are highly variable systems with dynamic and difficult-to-predict responses to management activities. In a world of insufficient information about whole systems, adaptive management involves monitoring the results of management efforts and adjusting activities as needed. In the cases where adaptive management is practiced, lessons are being learned about how best to apply this new approach.

A significant amount of restoration work is being undertaken on a small watershed or sub-basin scale. However, examples of how to apply adaptive management are derived from large-scale ecosystem restoration efforts implemented by teams of scientists and managers with relatively large budgets. There is much to be learned from applying adaptive management to small-scale systems with limited institutional capacity and financial resources. The project will produce and use a new model of adaptive management that recognizes these constraints. The project will develop a primer, "Applying Adaptive Management in Small-Scale Restoration Projects," to present the knowledge gained by implementing adaptive management in three to five smaller-scale experiments. This information will be publicized and widely distributed.

The Small Is Beautiful project is designed to directly address the limitations or gaps in knowledge regarding the application of adaptive management to small-scale restoration initiatives, by initially working with three to five small pilot projects. Expected outcomes include:

- ✧ increasing the number of CALFED-supported projects that produce significant direct scientific connections between implementation and physical effects in the watershed;
- ✧ increasing community involvement in the management of local resources;
- ✧ increasing the likelihood that projects meet their management goals;
- ✧ increasing the level of confidence in scientific data generated through citizen-based monitoring in the adaptive management process;
- ✧ reducing the cost associated with long-term project management and adaptive management;
- ✧ increasing coordination and learning across restoration projects; and
- ✧ ensuring technology/information transfer.



Yuba Science Advisory Committee at their first meeting (photograph by Steve Nicola).

CONTACT INFORMATION

Elizabeth Soderstrom, Ph.D.
The Natural Heritage Institute
409 Spring Street
Nevada City, CA 95959
Telephone: (530) 478-5694
Email: esoderstrom@n-h-i.org
Website: www.n-h-i.org



ADDRESSING THE DISCONNECT: WATER RESOURCES AND LOCAL LAND USE DECISIONS

Local Government Commission



A drainage swale at Village Homes in Davis, a model community that incorporates on-site water retention, groundwater recharge, and sustainability values in its design.

PURPOSE

Educate and encourage locally elected officials to consider effects on water resources when making land-use decisions

PROJECT GOALS

- ✧ Develop and implement an outreach and education project for local elected officials
- ✧ Develop local planning approval principles and policies for implementation by local governments
- ✧ Reduce overall water demand on the Bay-Delta system

AWARD AMOUNT

\$450,000

WATERSHED

Applicable to all watersheds in the CALFED solution area

COUNTY

Applicable to all counties in the CALFED solution area

CALFED REGION

Program-wide

LEGISLATIVE DISTRICTS

Applicable to all legislative districts in the CALFED solution area

Benefits to the Bay-Delta System

This project benefits local governments through education of local officials about sustainable development, water conservation practices, urban runoff, and groundwater recharge. The general public benefits when local officials make land-use decisions on a regional watershed basis, rather than as independent entities. The benefits accrue from supporting long-term sustainability of watersheds, reducing demands on imported water, and increasing collaboration among individual agencies throughout their shared watersheds.

PROJECT OVERVIEW

The Local Government Commission (LGC), in collaboration with the League of California Cities and the California State Association of Counties, is providing local elected officials with the tools to make land-use decisions that support the long-term sustainability of watersheds, work with neighboring jurisdictions in their watershed, and enact policies to reduce dependence on imported water. This project provides support for communities to make land-use planning decisions in the context of a watershed, rather than just existing jurisdictional boundaries.

The LGC has convened a technical advisory committee of local, regional and state officials and water experts to review draft principles and policies that focus on whole-systems planning and the value of making decisions at the watershed scale. A guidebook that includes these principles, a model general plan water element, and implementation policies will be published and introduced at an annual conference for mayors, city council members, and county supervisors. Five executive briefs that provide in-depth information on watershed management, water reuse and recycling, water conservation strategies, urban runoff, groundwater and conjunctive use, and best management practices and technology for new development will complement the guidebook. The principles of watershed planning will be the topic of six workshops within the Bay-Delta system to further educate local elected officials and provide an opportunity to interact and work together on a watershed basis.

This project includes a new web-based resource entitled “First Stop Shop for Water” for use by local elected officials and staff. It will be located on the LGC website and provide basic information and links to key resources for local government staff to implement the general plan water element. The guidebook, executive briefs, and conference and workshop presentations will be available for download from the website.

Within the project’s three years, the LGC expects a minimum of 50 local governments to adopt a water conservation element in their general plans and a minimum of 100 local governments to adopt at least one recommended water conservation strategy. As these local governments successfully implement these learned conservation strategies, other local governments may duplicate their efforts. Ultimately, the LGC hopes that the full complement of strategies, including working within a watershed context, will become business as usual in California’s cities and counties.



Community members working together on a local plan.

CONTACT INFORMATION

Patrick Stoner
Local Government Commission
1414 K Street, Suite 600
Sacramento, CA 95814
Telephone: (916) 448-1198 extension 309
Email: pstoner@lgc.org
Website: www.lgc.org